

Meeting Agenda:

Review and develop budget as required. Go over Deliverables this week. Develop tasking in accordance with current project schedule. Develop areas of expertise.

I) Project Budget

- a. Items to Consider
 - i. Primaries
 - 1. Solar Panel
 - 2. Battery
 - 3. Button
 - 4. Wiring
 - 5. Sensors
 - 6. Housing
 - 7. Power Regulator
 - 8. Controller
 - ii. Secondaries
 - 1. Power Converter
 - 2. Small AC Generator
 - 3. Housing Accommodation
 - 4. Other Power Generation Means
 - iii. Tertiary
 - 1. Solar Panel Adjuster
- b. Funding

-Phil asked if we were going to be simulating anything

- MATLAB Simulink.

-buy everything off the shelf probably already have a simulink attached to it already

- the battery, solar panel and r regulator the controller, power converter we will have to find something similar and tweak it for our design model

- For budget – we have the request forms ready and Dr. Law needs to okay it

- writing a short description, how much money we need, and what we are spending it on

II) Deliverables This Week

- a. Product Requirements (24th)
 - i. What do the end users need?
 - ii. What are the design limits?

-We will turn in our product requirement sheet on Friday 09-27-20.

III) Tasking

- a. Power Requirements – Research market alternatives

- Emailed Mark (facilities) and Dr.Abdel (NIATT)

- Mark will have to talk to some more people and that we will need to give him more specifics

- Attach to pole or make our own

- Jason will sketch what he is thinking, have us look it over and then send that to mark

- The MATLAB Simulink – have access through VLAB

- If we wanted to use SimPower Systems Block Set is downloaded on some computer

- Have specific models for products for example: solar panels but have limited ability to adjust

- Design Validation Plan- start thinking about when we are at the end of the project and see how we are going to validate our project and how it does what our objective wanted

- Presenting different options for the solar panel and talk about the tradeoffs

- First semester – get a design to move forward with, have simulations for different parts that we can compare at our design review. Have flexibility for as long as we can.

IV) Expertise

- a. Determine what areas each member has an interest in becoming the expert

- i. Power Management

- 1. Power DC Bus
 - 2. Battery
 - 3. Controller

- ii. Power Production

- 1. Solar Cell
 - 2. AC Generation
 - 3. Power Conversion

- iii. Sensor

- 1. Wireless signals for sign pairs
 - 2. Timing Relay
 - 3. Sensor
 - 4. Button

- Picking something that we can dive into rather than all having a general overview of all the topics listed above

- Be prepared for off the shelf products to not really want to

To Do:

- Do the product sheet: due Friday

- Need a plan on how we are going to simulate this

- If we need fabrication – we will need to reach out if we need to get shop training

 - Ian Glasgow is the ME teaching assistance – glas9633@vandals.uidaho.edu

- AC over DC generator?

 - If we get to the point of looking at this for a wind or water turbine, look into what other teams have done. College of Natural Resources – Taylor Ranch. Looked at a small hydro system with batteries. Power remote sensors – solar panels and a small wind turbine.

 - Dr. Hess would have a backup copy if we can't find the wiki pages